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THE DUTIES AND THE DANGERS OF ORGANIZATION IN THE NURSING PROFESSION.*

BY GEORGE M. GOULD, M. D., *of Philadelphia.*

When I received the kind and honoring invitation of your committee to speak to you to-day I chanced to be chatting with a friend; I read the letter to him and asked him what I should do. His answer was a description of his personal efforts in behalf of nurses and their calling, efforts extending over many years, and most unselfishly carried on. The general effect was not encouraging to me. My friend could not see how he had done any good to others while he had sadly wasted his own time and life, to find at last that he had aroused only suspicion and had ended in resultlessness. When I came to ponder the matter I thought I had found the solution of my friend's pessimism in the fact of the needs, difficulties, and dangers of organization, and that in the swift historic uprising of your large body, these needs, difficulties and dangers must at first necessarily end in much confusion and disappointment. All human institutions reach a condition of stable equilibrium through manifold trials, and the trials should not deter us from adding our personal influence as one factor that may, or, it is true, that may not have influence in determining or hastening progress. If our contribution is ineffective, we must remember that in science a negative experiment is always of value. We must learn the "No thoroughfares" of life for the first time and before signs have been put up across them, by actually running against them and thus experimentally proving that there can be no advance in that direction. Moreover, some later Baron Haussmann of progress may be able to crash the Boulevard of Science straight through the obstruction that we, in our impotence, deemed insuperable.

I shall say but a passing word as to the need of organization,—and that consists only in the emphasis of its inevitableness. You find yourselves in a somewhat chaotic condition to-day so far as pertains either to social, national, international, or professional organizations. But in these times of a thousand kinds of "combines" and concentralizations, there is no escaping the evolutional fatality of union. I use the word "fatality" advisedly because I would at least hint by it my feeling that there are cruelties and dangers of many kinds almost inevitably connected with any very thorough organization,—not enough to make us refuse to join, but surely enough to make us cautious. Majorities are tyrants and democracies are as tyrannous as any other type of government. The very forces of cohesion which compel like units to bind themselves to solidarity and unity of purpose have an

*An address to the Graduating Class of the Johns Hopkins Hospital School for Nurses, delivered June 2, 1899.

inherently fatal tendency to crush out the independence of the units and to reduce effort to a huge and ungovernable mechanicalism in which freedom is sacrificed to the attainment of object, and method is scorned for result. Up to now you illustrate none of this, and my warnings may seem very much like foolish croaking. I learn, indeed that your class is an instance of the good of organization, and with all my heart I congratulate you on the fact that the educational ideal has been uppermost in your three years of work, and that you have not been bribed and whipped to do an atrocious amount of slavish work for the benefit of some heartless institution, which pays you in a sheepskin, the significance of which lies in the knowledge fought for despite jaded bodies and minds. But the point of my croaking is that you compare the lots of many of your sisters in other training schools which demand so many hours a day of toil that the educational aspect is lost sight of, and is impossible for the weary ones. *There* you see the evil of organization.

In a calling like yours and, I may add, like mine—that of the nurse and the physician—the need of organization is most evident, and yet there is a strange waywardness, an unaccountable shyness which preserves freedom and individualism by an aloofness that serves at least as an excellent "governor" of the machine, and which keeps it from self-sacrifice to ultra-mechanicalism. For many years, in season and out of season, I have been pleading for a unitized medical profession and the dire consequences of our disorganization have never been more frightful than to-day. But none would be more prompt than I to delimit sharply the range of action of medical organizations, should they seek to tyrannize over the righteous freedom of the individual member.

In your calling and condition the duties and dangers of organization are greater than in almost any other. Among several reasons for this there is one that I trust you will pardon me for alluding to. I may do this the more freely because I have a hundred times urged the greatest liberality toward and encouragement of the desires of women for a wise equality of opportunity with men. But no such generosity need blind us to the fact that by nature woman in her uses of social power and organization is a "born tyrant." In the purely personal relation she is grace divine, but whenever put in authority over others, and especially over other women, she usually manages to make herself as hateful and as well hated as human ingenuity will permit. It is, of course, not always so, and thank God for the blessed exceptions! In organizations of women, women must necessarily be officers, and of course majorities must rule. It strikes me therefore in selecting the officials of whatever organizations you may form, you should use your best endeavors effectually to squelch politicians and tyrants and to reward those who show *das Ewig-Weibliche*, the graciousness of justice, and the justice of graciousness, in the exercise of authority and power. In governing, for Heaven's sake do not learn of us men only our faults while you assiduously forget both our virtue of justice and yours of love. The hardest duty you will have to learn is that of kindness and justice to minorities. Politically, the most tyrannous of human beings and the most enslaved is the American. Can you not manage it so in your treatment of those who do not vote with the majority, that you do not march over their rights with the ruthlessness which is fast reducing the terms Democracy and Republicanism to hideous jeer-words of inverted significance?

The roots of institutions and of organizations too frequently spring from the richly manured depths of selfishness. The commercial doctor is despicable enough; do not add the commercial nurse to the terrible burdens under which humanity must stagger!

If the spirit of trades-unionism gets control of your societies and organizations, I hope they will quickly be blown to utter smithereens. The very essence of your life, the heart of your work lies in the personal relation, the wooing back to health and life of bodies and minds hurt in the world's financial warfare. Send metal, even gold, instead of blood, into your hearts, and you may have very perfect corrosion-images of the cardiac structure for the laboratories of the future nurso-pathologist, but you will then be deservedly dead while the pathologist will be lecturing learnedly upon your fatal disease. I beg that you will keep the financial relations to your patients utterly out of the reach of your laws and by-laws and resolutions. This is absolutely a personal matter to be governed by your character, your ability, your whim and fancy, and by your patients' condition in life; I hope you will withdraw from any society that in the least attempts to govern you in this matter. Money you must have to live by, as must all of us. Nursing is your trade; it must give you the means necessary for carrying on your trade; but if you wash dishes for money alone they will be dirty dishes when they leave your hands. When your work is an art and when it is with the material called life, the rule holds all the more strenuously; the great God of Life will not allow you to have a master above Him!

This brings us logically to a thought concerning the relation of the nurse to the family of her patient. There is one pretty effective answer to the impertinence of some families which would look upon the nurse solely from the employer's point of view. If you let such upstarts see that the financial motive is the dominant one in your mind and in your organizations, your answer to the one impertinence is only by another: *I'm as good as you!* But the killing reply to all false pride is the acted one: *I am in truth better than you,*—that is, I will prove to you that I am more unselfish than you. To those who would positively or negatively treat you as a kind of servant paid for by your demanded wage, you may, as does the true physician, teach a nobler way, both by word and action, that while the laborer is indeed worthy of his hire, the hire is not by any means the worth of the laborer.

Not the least of the dangers to which as an organization your guild will be subject is another kind of subserviency—to the physician and to his profession. To steer clear of the Scylla of a too smart independence and the Charybdis of a too decided servantship will task the tact of the best of you. In all matters pertaining to therapeutics, of course you must be unflinchingly loyal and even obedient to the medical man's orders. And yet you have your own individuality, and, as an organization, yours should be an entity subject to your own corporate ideals and conditions. There has been much criticism of a tendency, for the existence of which I cannot

vouch, for the nurse to supplant the physician. Many nurses are doubtless wiser than many physicians, but tragedy awaits that nurse who is conscious of the fact, at least if she even whisper it to the person in her mirror!

I suspect the nurse's greater danger lies in the loves and hates of partisanship. "Her favorite doctor" is liked altogether too much, and the one she does not fancy is not half so bad as she thinks. It may be that she needs to rid herself of all such likes and dislikes and fix her attention upon the impersonal aims and needs of her calling. I have heard of chief nurses who turned hospitals topsy-turvy and transformed training schools into hothouses of evil and cliqueism by assigning hated nurses to detested physicians, or by working her girls to death, and other such petty savageries. It is sad,—but possibly the world will be better when you all become head nurses and superintendents!

The business conduct of your organizations will need careful looking after. To be effective, charity itself must become a business. Some wise unwise mot-maker has said that charity is the basest of human passions. Doctors are proverbially bad business men, (though I do not believe they are quite so pitiable as they are represented) but surely despite all their native shrewdness in buying and selling, women will probably commit grievous business errors in conducting their organizations. A lawyer-like prudence is demanded nowadays to guide any great movement right. The friend of whom I spoke tells me that a most excellent scheme of an insurance or beneficial organization for the benefit of nurses went all to smash after great efforts and partial successes because of—but that is another story! Would it be rank heresy to suggest a cool, legal, male brain as an adviser even to the wisest and best of women? Surely the Red Cross Society has lately demonstrated with appallingly glaring colors the need of such a head. When an organization handles millions of dollars without accounting for a cent, it is high time that sane men and women should pinch themselves to see if they are really awake or not. You need to make every training school in America demand a free three-years' educational course with only 8 hours a day devoted to practical work; you need a great journal devoted to your interests and your progress; you need something corresponding to an insurance company adapted to your peculiar conditions; you need a post-graduate school for superintendents; you need a systematization of your business, how to find work, how to supply country towns and farms with trained nurses, where to secure special training, and how to find the people wanting that kind of specially trained nurse, etc.; you need nurses' houses or homes, where you can meet each other, and have something like a home when you are off duty; you need special loan-libraries; you need laws to protect your calling from the scandal of the corrupt, who, for purposes of gain and immorality, don the garb of the nurse; you need a rigid ordering of your relations with the city, the State, and the National Government, and particularly with the military departments; you need an energetic national and even an international organization, and for all these and other things you need wise and clear business heads to govern and to guide you, and to mold your guild into one of the great agencies for alleviating sociologic ill and for bringing about a more lovely civilization than we have so far dreamed of.

And, with it all, will you hate quackery more than you do the devil himself? Already the quacks, those pathogenic microbes of the profession of medicine, those verminous parasites of poverty and ignorance, are quoting Trained Nurse So-and-so as endorsing such and such a concoction or contraption for the magical cure of all disease. I beseech you by all that is holy and of good report, that you renounce this wickedness! When the official head of a representative American nursing organization officially sprawls over and through the advertising pages of the yellow newspaper as a limitless endorser of "Greene's Nervura" and of "Electropoise," it behooveth you to haul up sharp and see that your skirts do not draggle even in the shallowest of these filthy puddles!

I wish I could say something of use, and that might encourage you to add your influence in providing an effective and systematized service of trained nurses for the United States Army. Whether in peace or in war (except perhaps in the front during actual battle) the army needs you. The lack of such an organization with its resultant terrible morbidity and mortality among the sick soldiers during the late Cuban skirmish was demonstrated beyond all doubt. The Nurses Associated Alumnae of the United States and Canada at their second annual meeting in New York about a month ago, took up this important matter, and are earnestly trying to secure the passage of a bill by Congress to bring about the desired object. In this way only can the business be systematized, the wasted efforts of competing organizations neutralized, and as Carlyle would say, the work get itself done.* Another good that would follow the establishing of such systematization would be the disappearing forever and ever, world without end, amen, of the advertising self-seekers, the quack doctors posing as philanthropists, and the silly mob of the charity-becrazed sentimentalists, all buzzing about with their incapacities and fatuities like the myriads of Blue-Bottle Flies of The Four Little Children, described in a wise geographic book actually written before the Hispano-American War.†

Women may be divided into three classes, the Good-for-somethings, the Good-for-nothings, and the Unspeakables. There is nothing which fashion hates more than the first class. In its heart it likes the third class far more. With

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*In our imperialism-craze you must suffer for the sins of your rulers, and must prepare yourselves to meet the demand for nurses in tropical countries where in the name of liberty we are shooting down those who ask for liberty. The English *Colonial Nursing Association* was formed in 1896 to provide specially trained nurses for England's colonies in all parts of the world. The *Lancet* makes the wise suggestion to try to train up a school of native nurses. Here is a great work for you also.

†"And on the signal being given all the Blue-Bottle Flies began buzzing at once in a sumptuous and sonorous manner, the melodious and mucilaginous sounds echoing all over the waters and resounding across the tumultuous tops of the transitory titmice, upon the intervening and verdant mountains with a serene and sickly suavity only known to the truly virtuous."

the sharp X-ray eyes of moralized intelligence, look through the walls and roofs of a vast number of modern homes and you will find doless daughters whom their parents are trying to get rid of, and doless wives who, money alone excepted, are trying to get rid of their husbands.

When servant-girls marry, the first thing they demand is a servant-girl. Shop-girls—I beg pardon, I mean Salesladies—must not work after marriage, they must ape the vices of the second class of ladies who scorn their too perfect flatterers. Lazy, cunning, pretty, empty-headed, and empty-hearted, the young ladies of the foolish ill-to-do well-to-do, while nursing their hysterics, and their flaccid muscles, manage to twist ever tighter the silken bands whereby, sitting at the center of the commercial economic slaveries of civilization, they draw into their laps the stolen products of human industry and cruelty, avid to get the most and give the least. But even here are awakening, thank Heaven, an increasing number of women who, like Doré's monk, are looking about them with horror and alarm, and are determining that *their* lives at least shall not sink into the degradation of spiderhood. Yours is the splendid proving that there are at least ten thousand American women unsatisfied with araneal ethics.

In other reactions from spiderliness we have many sad morbidities, the "New Woman" being not the very least. Perhaps the "New Nurse" is to be another if she is not wise and wary. Institutional medical charity justifies all the bitterness wrapped in the jibe that "charity is the basest of human passions." If it is incapable of turning all the milk of human kindness to bonnyclabber and even to mitey cheese, if it cannot at one stroke and directly pauperize the patient, curse the giver, and debauch the medical profession, it labors hard to do it by indirection; then if all plans fail, trust some advertising medical college for getting hold of several hundred nurses and making them help the Professors to attain notoriety, students, consultations and iniquitous state appropriations! Organization and Institutionalization may be good things for you, but not unless you are somewhat wiser than serpents and more shy of nets than are many doves.

The most powerful antidote for the evils of malorganization or over-organization, and for the dangers that beset your future career, I believe will be found in the very nature of your calling and in the goodness of the human heart, which rarely fails to respond sympathetically to the cry for help by the suffering.

And this work of yours is so good, and will only remain so good, if you refuse to allow any institution, or rules, or organizations to come between you and your patient. Your calling is of the best and most truly evolutional (not revolutional) because it continues the kind of occupation and by the same methods you have inherited from Mother Eve,—personal work by personal methods. The giving of love, care, helpfulness, sympathy, nurturing, nursing,—what else has woman done in the world? What better thing could any being do? The female man-imitators are doomed! Is evolution a word, a philosophy, a thinker's game of thought, or is it the most actual of facts and the most inescapable of biologic laws? There can be no rejection of the law of heredity. The habits of a million ancestors are commands which we seek to break only at our infinite peril. The fact, of course, is that each of our personalities is the last link of the biologic chain which binds us to the infinite number of our ancestral organisms, and God, if you please, has yet some control of the cosmic process! He will hardly permit the last link to cut itself from the past and set up as an independent existence. The ghosts of all history unite in and direct each individuality. Strength and effectiveness consist in obedience to their orders.

There is one way in which organization can help you, if you, as you must, use it as a tool and not allow it to use you as one. This consists in making it a means whereby you come to your patient. The hospitals have half turned you into servants,—they at least are well supplied with nurses, so we may leave them out of the count. Then the rich have you at command; for we are all the slaves of the plutocrats. Upon them then we may waste no thought or sympathy. The poor, *i. e.* the very poor of the cities, can also command you, through the hospitals. But there are far more needy, more numerous, more worthy classes to whom neither you nor your societies, I fear, have hardly given a thought. Among these are the farmers and the people of small villages. These constitute the great majority of the good people of the United States, and they do indeed need your advice, skill, knowledge, and help, quite as much as do any city-folk. Ignorance and disease await you there fully as much as they do in crowded places. It seems to me that one of your primal duties of organization is to secure a machinery of distribution whereby you and your knowledge of hygiene, the knowledge *par excellence* of the trained nurse, shall be brought to the country and to the village. Genuine missionaries you must be to carry the gospel of nursing to your far-away over-worked and untrained sisters of a million country and village homes, and to the sick ones there.

The reckless poor and the reckless rich of the cities, as we have seen, are well nursed and provided for; they are your masters. But let it no longer be said that "none but a pauper or a millionaire can enjoy the luxury of a nurse." You have yet to organize a machinery to reach the wants of the great and more deserving middle classes. To this class let us add another that still more acutely touches our sympathies,—the proud and self-respecting poor of the cities, who, no worse off financially than the spongers, have as yet not been bribed, corrupted, and herded in the hospitals and almshouses by the professional philanthropists and the selfish charity-mongers. It seems to me that your most pressing duty is to these two sets of people. The clerk, the prudent workman, the little shopkeeper, the working woman, etc., with incomes of from three hundred to one thousand dollars a year—these cannot afford to pay you twenty dollars a week for your services. And if this is so, those with still smaller incomes can afford to pay you but a small percentage of this amount. And for that matter, is your conscientious, skilled, and devoted help for seven days and nights, not really worth far more than twenty dollars? Remember too that your profession is fast filling and like every other, filling to overflowing. Give, then, in advance and in chosen cases, before pitiless competition forces the wage-limit down. But that is a deplorable argument; so let us return to the more gracious, eternally-to-

be-repeated, eternally forgotten, *Noblesse oblige!* Wage-pride in a nurse or a physician is the devil in the pulpit; it is Croker and Quay throned and lording it as statesmen. In this matter I beg and beseech you to think of the duty and the blessing of grace, and the gift of yourselves. Most other giving than self is, in the last analysis, but a fraud and a delusion. Whether you will or will not, you are, if not copartner of the medical profession, at least a chief assistant; and the tradition and the practice of the members of that profession is to give on the average at least one-third of their lives to the needy and suffering, without thought of compensation in money. Verily, verily, I say unto you that you must go and do likewise! If you wish us to love and honor you, that is the surest way to command our honor and love. By what means? Quickly comes the answer: First, by individually meeting the need of the needy with your service, or a part of it, at a price or at no price, corresponding to the ability to pay; Secondly, by means of the Visiting, or District, or Instructive Nursing Society. If there is no such society where you live, then establish such a society! Start it with a membership of one; get others to join; plan it out, work it out, with the help you can and will find if you do really wish to find it. If the established society works badly, if it is the outcome of dilettantism and unbusiness-like sentimentalism, set to work to put it in better order. All things are possible to the resolved woman!

The Instructive District Nursing Associations of Chicago and of Boston, seem to be models. These and similar societies have recognized the profound need of teaching the members of the families among which they go how to become good nurses; how by example and precept to care for each other and for themselves, and in a hundred ways to brighten and purify their lives. A nurse is not a good nurse unless she is a good teacher and inspirer of others to emulate her skill, neatness, and unselfishness. In district nursing one has a greater variety of cases, more out-of-door exercise, greater freedom Saturdays and Sundays, etc. One also, I think, does more good and leaves more lasting impressions. There is a commingling of pathos and fun that is altogether blessed, and seeing more life, one's own character is broadened and sweetened. In the choice and method of carrying on an occupation, the purer the purpose and the more earnest the emotion, the closer must one come to actual life. All desire to get away from the blood and muscle and heart-throbbing of actuality, ends in resultlessness, ennui, and even in downright sin. Keep your finger on the pulse of life if you would know how the heart of life is beating. But all who can, must be made to pay for the work and for the teaching. Selfish charity is very pleasant but it is very iniquitous. Nay, more, all charity is a curse unless it seeks to do away with the need of charity. You must not let your noble calling degrade into vicious relief-doling.

Is aristocratic flummery and class-prejudice beginning to appear among you? I hear whispers of the fact, and in some of the literature I have glanced over, especially in that emanating from England, it crops out in amusing innocence. I have found there such recurring expressions as "Nurses of high birth," "of lower birth," etc. I am treading on dangerous ground perhaps, but I trust that there is sufficient Americanism in you to scorn such long-eared nonsense. Neither in your speech nor in your hearts let such expressions and distinctions arise. If in the sisterhood of nations our country has any function it is surely to show the unchristianity, the untruth, and the unscience of such prides and such lack-o-prides. The only professional or scientific significance of such terms I can imagine is the obstetric one:—the high-birthers must have entered the world after the manner of Caesar! The common fashion of the low-birthers seems preferable! But I hear that the high-birthers make the best nurses, are better for the instructive and district nursing societies to employ, that they are better received in poor families, that they are not so "stuck up" as regards what is called menial work, etc. Let every low-birther make it her chiefest point of pride to disprove this!

Let me read a few sentences from the history of the Mayflower people by one of them. They surely were low-birthers if there ever were any such:

"But that which was most sadd & lamentable was, that in 2. or 3. moneths time halfe of their company dyed, espetialy in Jan: & February, being y^e^ depth of winter, and wanting houses & other comforts; being infected with y^e^ scurvie & other diseases, which this long vioage & their inacomodate condition had brought upon them; so as ther dyed some times 2. or 3. of a day, in y^e^ foresaid time; that of 100. & odd persons, scarce 50. remained. And of these in y^e^ time of most distres, ther was but 6. or 7. sound persons, who, to their great comendations be it spoken, spared no pains, night nor day, but with abundance of toyle and hazard of their owne health, fetched them woode, made them fires, drest them meat, made their beads, washed their lothsome cloaths, cloathed & uncloathed them; in a word, did all y^e^ homly & necessarie offices for them w^ch^ dainty & quesie stomacks cannot endure to hear named; and all this willingly & cherfully, without any grudging in y^e^ least, shewing herein their true love unto their friends & bretheren. A rare example & worthy to be remembered. Tow of these 7. were M^r^ William Brewster, ther reverend Elder, & Myles Standish, ther Captein & military comander, unto whom my selfe, & many others, were much beholden in our low & sicke condition. And yet the Lord so upheld these persons, as in this generall calamity they were not at all infected either with sicknes, or lamnes. And what I have said of these, I may say of may others who dyed in this generall vissitation, & others yet living, that whilst they had health, yea, or any strength continuing, they were not wanting to any that had need of them. And I doute not but their recompence is with y^e^ Lord."—*The Bradford History of the Plymouth Plantation.*

"Servants of the poor" is another term used by orators to graduating nurses and by writers of mock heroics. It is quite highfalutin—and quite silly! I trust you will not go to your life-work a victim of any phrase-maker's tricks. Your first duty, like that of all of us, is to see facts; your second, is to know facts; your third, is to make facts. If you must dub yourself with any other titles and think of yourself as anything less or more than a nurse—quite a noble and ennobling name, I think—is not the word *friend* enough? A servant you must not be, a patronized or a patronizer you dare not be. Friendship is what is needed by the patient and by his family. The friend may teach and help, not serve or patronize; he must always sympathize with and love.

You may gather that I have a more vivid feeling of the

dangers than I have of the benefits of organization, and I shall not very emphatically deny the charge. The shame and infamy of anti-Dreyfus France, the degradation of American boss-politics, the cruelty and selfishness of monopolies, our pension demagogery, such things are ever before our eyes to warn us against giving up our freedom and our honor to any organization. The hardest of all problems you will have to solve will be to secure the good things that are obtainable only through organization and at the same time to avoid the evils so generally the consequences of organization.

It is only by means of money that one can get that which is worth more than money, and that which money cannot buy. Just so it is only by means of organization that you can obtain that which organization alone cannot give. This means, of course, that you must use the power derived from organization as a mere instrument. There is nothing more harmless, neutral and unorganized than water—the oceans of it that cover so much of the earth. There is nothing more symmetric and beautiful than a snow crystal; but transmute an ocean into a polar ice-cap, and death is its command, even to the wandering splinter of it called an iceberg. Let love and ethics fail for a day to use, fill and thrill your organizations, and the devil will surely seize upon them and make them serve his purposes.

In the polar regions of our earth the cold is so intense and continuous that ice and snow are always forming and it is impossible to say what would be the disastrous consequences as regards the temperature, climate and vegetation, even the life of the entire globe, were it not for the existence of one great countervailing fact: Up from the great oceans of the equatorial and temperate regions softly creep the massive currents of warmer water, until approaching the poles, they dip deeply downward beneath the arctic ice-cap, and spreading through these freezing ocean abysses, they bring the melting messages from the far-away sun, from summer days and smiling climes. Your work in life seems wonderfully like all this. However lethal and frightful our civilization, it shines with such splendid and alluring auroras that into it with reckless fatalism press the infatuated discoverers and travelers from lands where labor wearies and deadens, and where love is becoming the legend of idle singers of empty days. Over this white waste of frigid expanse deepen the glaciers of selfishness, and glitter the ice and snow of luxury and of greed. Among the influences that prevent this palsying congelation of death from crawling and crunching through the whole wide world, comes Love! And what love is purer and more vivifying than that of you workers, what more heartening than that which gives itself to win back to health, to hope, and to life, those who have been broken by disease and worn by suffering? Yours the privilege, cosmic and yet personal, of throbbing beneath and through the bitter chill of an icing civilization the softening warmth of divine beneficence and love!

A PIN IN THE VERMIFORM APPENDIX.

By James F. Mitchell, M. D., *Assistant Resident Surgeon, The Johns Hopkins Hospital.*

In the Johns Hopkins Hospital Bulletin, Nos. 94, 95, 96, January, February, March, 1899, was published a collection of thirty-five cases in which pins had been found present in the vermiform appendix, or had been the cause of attacks of appendicitis.

Since this publication a most striking case has appeared in the service of Dr. Halsted, and in connection with the subject seems worthy of record.

History.—W. O. R. (Surg. No. 8898), a colored boy, aged seven years, was admitted to the surgical wards April 26, 1899, complaining of "cramps in the stomach."

Since he was two years of age he has suffered from repeated attacks, with abdominal symptoms referable to the right iliac region and accompanied by pain, tenderness and vomiting. These have recurred at intervals of a few months for the past five years, the duration of the attacks varying from a few days to one or two weeks. The intervals have never been completely free from local symptoms.

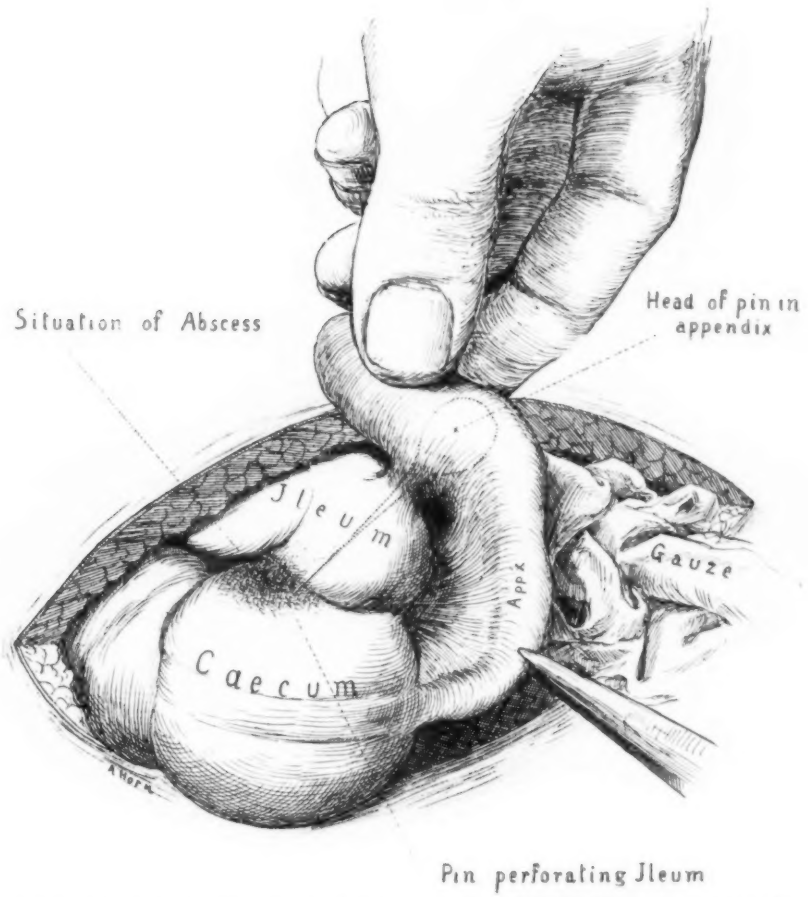
No history of the ingestion of a foreign body could be obtained from the parents.

On April 22 (four days before admission) he complained of feeling badly, and of a feeling of tightness in the abdomen followed in a short time as usual by cramps and vomiting; no chill; not much apparent fever. Since onset there have been paroxysms of pain about the navel, the attacks lasting three or four minutes and being so severe as to cause him "to be doubled up." Abdominal tenderness has been marked; bowels constipated, one movement yesterday, after medicine; no pain on micturition, but increased frequency.

Examination on admission (Dr. Cushing). "Well developed colored child with slightly pinched facies; lying on back with knees drawn up. Pulse compressible, rather poor quality. Tongue has a diffuse, thin, white coating. Respiration costal in type; abdominal movements slight. *Abdomen* slightly and symmetrically distended. Child protects right iliac region with hands. Dulness over whole of right iliac region. No dulness in left flank. Abdominal spasm and rigidity limited to right iliac fossa render palpation difficult. There seems, however, to be a mass in the right iliac fossa. Temperature 103.2°. Leucocytes 11,000." He was prepared for immediate operation.

Operation under chloroform anaesthesia (Dr. Cushing). *Laparotomy for appendicular abscess. Evacuation of abscess. Appendectomy. Pathological anastomosis of tip of appendix with ileum, through which a pin passed, producing a perforation in opposite wall of ileum. Closure of two appendicular communications. Drainage.*

Under anaesthesia the tumor was found to occupy the



From a sketch at the time of operation by Dr. Cushing. Showing the relations of the pin to the appendix, ileum and cæcum.

The appendix and pin after removal. Showing the pin encrusted with fæcal matter.

whole right iliac region from median line to level of umbilicus. Incision was made over the tumor through outer border of rectus muscle, and subsequently enlarged, dividing the epigastric vessels. The abdominal wall was oedematous. The tumor mass was covered by a layer of infiltrated omentum, which was adherent to anterior parietes. Adhesions were freed and walling-off gauze placed about the mass at points of approach to the free cavity.

The tumor mass was attacked and an abscess containing about 15 cc. of bad smelling flocculent pus evacuated. Coverslips showed some bacilli, no streptococci.

The *appendix* was sought for and finally freed from the side of the tumor mass. No perforation could be made out in the appendix. The abscess was situated at some distance from it lying between cæcum and ileum. The appendicular serosa was not markedly injected. The appendix was found to have a double communication with the bowel; one at its base and another about 2 cm. from its tip, where it anastomosed with the ileum by a free communication opposite to the mesentery.

In the appendix opposite to this communication a hard, round body, the size of a hat-pin head, could be felt, and running from this through the passage into the ileum extended the shaft of a pin, the point of which reached the abscess some distance away.

The meso-appendix was tied off and the appendix amputated at its base, the stump being inverted into the cæcum. The communication with the ileum near the tip was treated in the same way, the opening into the ileum, which was lined by mucous membrane, being closed by three mattress, Halsted sutures which had been placed before the division.

The seat of operation was drained with iodoform gauze and the abdominal wound partly closed.

The patient took the anaesthetic well and had no bad symptoms referable to it.

The operation was performed in the afternoon and the child seemed in good condition at its close, although the pulse was rapid—134. During the evening he was comfortable and apparently doing well. Frequent salt-solution enemata were given to relieve thirst. At midnight he was seen by Dr. Baer, the ward surgeon. The pulse was then 116 and of fair volume and the patient complained only of slight pain.

At six o'clock next morning the nurse noted no change in his condition; pulse slower. Happening to pass his bed a few minutes later she noticed his eyes rolled up and glassy, and was unable to rouse him. Attempts to resuscitate him were unavailing and he died at 6.45 a. m.

Autopsy (Dr. MacCallum) showed localized peritonitis, about cæcum; broncho-pneumonia of slight extent; great enlargement of thymus; small hemorrhages about thymus and mediastinal tissues; moderate glandular hyperplasia.

No definite assignable cause of death.

Bacteriology.—Bacillus coli communis and an unidentified bacillus were obtained from the appendix. (Dr. Clopton) cultures from the heart, spleen and thymus gland were sterile. Pneumococcus was gotten from the lungs, and from the kidney and liver bacillus coli communis. Cultures from the kidney, liver and peritoneal cavity gave an unidentified bacillus, probably proteus Zenkeri.

THE PRESENCE OF TYPHOID BACILLI IN THE URINES OF TYPHOID FEVER PATIENTS.

BY NORMAN B. GWYN, M. B., *Assistant Resident Physician Johns Hopkins Hospital.*

It has been frequently shown that typhoid bacilli may be present in the urine of typhoid fever patients and convalescents and that the danger of infection from this source was seriously to be considered; up to the present time, however, we have completely overlooked this question, and systematic disinfection of the urine has never been perfectly, if at all, carried out. If the presence of these bacteria in the urine were but an occasional happening and associated always, as in some cases, with urinary disturbances marked enough to attract attention and arouse suspicion, no great danger of infection need be feared, but their occurrence in 20 to 30 per cent. of all cases, often in urines presenting slight if any alteration, makes it very evident that in the spread of typhoid fever the urine plays a far greater part than has heretofore been suspected. Bouchard, in 1881, seems to have been the first to describe this condition, his investigations showing bacilli in 50 per cent. of cases; faulty differentiation of the typhoid from colon bacilli may have given this high percentage.

Hueppe, Seitz, Konjajeff, Karlinski, Neumann, Borges, de la Faille give varying results in describing the same condition. Hueppe finding bacilli but once in eighteen cases, Karlinski in twenty-one of forty-four. Blumer, in this hospital, investigating pyuria in typhoid fever found typhoid bacilli twice in sixty cases. Wright, of Netley, obtained typhoid bacilli in the urines of six of seven cases. Besson in six of thirty-two. Neumann noted that the bacilli were usually in pure culture and were often so abundant as to render fresh urine turbid, the urine remaining, however, acid in reaction; the evident danger of infection is emphasized by this writer and others.

More recent work has been done by Petruschky, Horton-Smith, and Richardson. Petruschky, though obtaining bacilli but three times in fifty cases, dwells upon the number and persistence of the organisms, calculating that in one case 170 million of bacilli were present in one cubic centimetre of the urine; persistence of the bacilli for three months after convalescence was seen in one case.

Smith found bacilli in three of seven cases and confirming Neumann's observations, adds that it is often possible to detect the organisms in the freshly-voided urine.

Richardson's investigations are perhaps the most important. In two series of thirty-eight and sixty-six cases of typhoid

fever, bacilli were obtained from the urine in nine and fourteen instances; the time of appearance, the persistence and disappearance of the bacilli, the coincident condition of the urine, and therapeutical resources for removing the organisms are fully discussed.

The results obtained by the above observers may be thus briefly tabulated:

1. In quite a high percentage, perhaps from twenty to thirty per cent. of all cases of typhoid fever, typhoid bacilli may be present in the urine.

2. When present they are usually in pure culture, often so numerous as to make the freshly-voided urine turbid and may then be detected by a coverslip examination.

3. Appearing generally in the second and third week of illness, the organisms may persist for months or years, probably multiplying in the bladder, the urine being apparently a suitable medium for their growth.

4. Though often showing evidences of cystitis, and marked renal involvement, the urine containing bacilli has usually only the characteristics of an ordinary febrile urine; the presence of bacilli has no prognostic importance, and their disappearance or persistence without having induced local change is the rule.

5. Lastly, as shown by Richardson, irrigation of the bladder with bichloride of mercury, and the internal administration of urotropin, a compound of ammonia and formaldehyde, seem to be safe methods of removing the bacilli; thirty or sixty grains of the latter quickly removing all bacilli in six cases.

In discussing the conditions under which bacilli may be present in the urine, it must be mentioned that an association of bacteriuria with the typhoid roseola was early noted and has been mentioned by most observers. Konjajeff held that bacteriuria indicated always the presence of the lymphoid nodules in the kidneys; according to Borges some impairment of the renal tissue was always necessary to allow passage of bacteria; Wright sees in the bacteriuria and roseola clear evidence that typhoid fever is a general infection; Blumer thought that occasionally the bacilli came to the bladder through the anterior rectal wall; Futterer's work showing the almost immediate appearance in the gall-bladder and urine of organisms injected into the portal and jugular veins, together with the fact that many urines containing bacilli show no evidences of renal changes, may be taken as indicating that the typhoid bacilli may appear in urine as a simple excretion from the blood. That typhoid bacilli are present in the blood in practically the same per cent. as in the urine is seen from the work of Kühnau and others.

Since Blumer's investigations in 1895, no bacteriological examinations of typhoid urines have been followed in this hospital. The occurrence of several cases of cystitis in the typhoid cases, and the outbreak of a small house epidemic of typhoid fever drew our attention thereto; although in the first case examined aspiration of the bladder was resorted to, it was found that cleansing the meatus and anterior urethra with 1-50000 bichloride sufficed to give pure cultures in almost every case, the standard tests for differentiating the typhoid bacillus were employed; if on examination of the fresh specimen no organisms were to be seen, as much as five to ten cubic centimetres of urine were plated out.

In most of our cases pyuria and signs of bladder irritation were present, the development of which led to the bacteriological examination; in others the urinary condition aroused no suspicion.

Case I, for the report of which I am indebted to Dr. Cushing, was at once the most remarkable and interesting, presenting a chronic cystitis of four years' duration, following shortly after an attack of typhoid fever. Pure cultures of typhoid bacilli were obtained on aspiration of the bladder; the patient left the hospital much relieved by bichloride irrigations. Unfortunately we have not been able to follow the further history of this case. Houston reports a somewhat similar case of three years' duration.

Case II showed the development of an acute cystitis at the end of a relapse six weeks from the onset of his illness; typhoid bacilli in large numbers were obtained in pure culture from the urine; the pyuria and symptoms cleared up on irrigation (bichloride of mercury 1-50000) and at present, three months after discharge, urine is quite clear and, on culture, negative.

In Case III, an outside case; marked pyuria in the third week together with the fact that the patient had never given a Widal reaction induced the physician to have cultures taken from the urine; the examination of the fresh urine showed myriads of motile bacilli, proving on culture to be typhoid; the urinary condition improved on bichloride irrigation, and three months later the urine was clear and showed no bacilli on culture.

Case IV developed pyuria in the fifth week of his illness. Numerous bacilli were present in the fresh urine; the urinary condition cleared up on bichloride irrigation; patient could not be followed after his discharge.

In Case V, the development of a cystitis three months after an attack of typhoid fever; typhoid bacilli were present in abundance in the fresh urine; the condition improved on irrigation and an examination three months later showed the urine clear and no bacilli.

The three next cases we could follow more closely, and could also watch the effect of urotropin on the bacteriuria.

In the first of these a severe nephritis and cystitis had developed in the third week of illness; the freshly-drawn urine was turbid from presence of pus and innumerable bacilli; it could be calculated in this case that 500 million typhoid bacilli were excreted in each cubic centimetre of urine.

Urotropin grs. x three times daily was begun and in two days no bacteria were to be seen in the urine, ten colonies of typhoid bacilli however growing on culture from one cubic centimetre; the nephritis and cystitis improved and after 5 days no bacilli could be cultivated; cultures remained negative for two weeks and the urine was now free from all traces of nephritis or cystitis. At this time however although patient was still taking urotropin, and after six hundred and thirty grains had been administered, typhoid bacilli reappeared in considerable numbers.

In the second of these three cases pyuria and signs of cystitis developed in the third week of illness, numerous bacilli were to be seen in the turbid fresh urine, which bacilli, though the

patient had never given a Widal reaction, proved to be typhoid organisms; after 80 grs. of urotropin grs. v three times daily the bacilli disappeared and pyuria improved, but in spite of the fact that urotropin was continued, both bacilli and pus reappeared on the eleventh day of treatment, or after 165 grs. of urotropin had been given. Treatment was continued, and in six days more bacilli disappeared entirely, and have never reappeared. In this patient it was calculated that 3 million typhoid bacilli per cub. centimetre were being excreted at the time of first examination.

The last of our cases, one of typhoid septicaemia, running an irregular course with intermittent fever and chills, and one in which the Widal reaction was at first uncertain, had nothing in the urine to attract attention, there being but a trace of albumin and slight turbidity. The turbidity was found to be due to innumerable typhoid organisms. Urotropin grs. x three times daily reduced the number of organisms to one hundred per cub. centimetre in four days. The patient died on following day still showing few bacilli in the bladder. Typhoid bacilli were found everywhere throughout the body at autopsy and in the blood before death; till the appearance of a marked Widal reaction the urinary condition in this case gave the only reliable indication of the nature of the illness, and it seems reasonable to suggest that in cases where the Widal reaction is delayed a bacteriological examination of the urine should be made, especially since it has been repeatedly shown that with the presence of the typhoid bacillus in the blood, the serum reaction may be long delayed or feeble. This absence of the Widal reaction with presence of bacilli in the urine was noted in two of the foregoing cases. As most of our cases were selected for examination on account of their urinary condition we cannot use them to figure percentages of results. In a later series of seven cases positive results were obtained in the three final cases above recorded, or in 42 per cent. of cases.

We were not able to determine at what time the bacilli appeared in the urine, their persistence for four years in one case and three months in another being seen. In the latter case the urine showed nothing suspicious till the development of cystitis at the end of three months; this patient during convalescence probably excreted millions of bacilli daily, and might have continued so to do had his urine not come under observation; estimating, as in one of our cases, 500 million bacilli per cubic centimetre of urine, a daily amount of 1000 cc. of urine would contain 500,000 million organisms. According to Petruschky's calculation, such a urine if diffused in ten cubic metres of water or sewage would give 50,000 colonies of bacilli per cubic centimetre of the water. In most of our cases there was pyuria; albumin was present twice in large amount, usually however, only in traces, with albumin generally a few hyaline and granular casts; in one case the urine showed no pus and neither albumin nor casts; complete repair of the affected bladder or kidneys, as far as could be seen from the urine, was the rule, the cystitis of four years' duration had been untreated and had become very chronic.

The observation of Neumann that in typhoid fever cloudy, freshly-drawn urine acid in reaction could usually be suspected, was frequently confirmed, the possibility of detecting the bacilli in the fresh specimen as emphasized by Smith, being shown in all but one case. For the removal of the bacilli, bichloride irrigations (1–50000) were completely effective in three of five cases which could be followed; 165 grains of urotropin removed the bacilli in one case; in another reappearance of the bacilli during its administration was seen; in a third there was immediate reduction of the number of organisms, the death of the patient preventing further observation.

The infected urine could be readily rendered sterile in half an hour by the addition of an equal volume of 1–40 carbolic acid.

Since typhoid bacilli are present so frequently and in such abundance in the urine, unless a systematic bacteriological examination can be made, all typhoid urines should be disinfected before being thrown out; great care should also be exercised in the handling and routine examination; careful centrifugalization of urine is usually possible and in the absence of cultural tests should be insisted upon; detection by this means of bacilli in fresh urines, should suggest the applicable anti-bacterial treatment and proper disinfection of the urine.

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DISCUSSION.

DR. HARRIS.—We are greatly indebted to Dr. Gwyn for this painstaking work in regard to the very important question of the elimination of typhoid bacilli through the urine. It is remarkable that as long as the organism has been known to be so very ubiquitous more examinations have not been made heretofore of the urine. The necessity for examinations of the urine as a matter of routine in all cases should be strongly brought forward. I would like to ask Dr. Gwyn some questions regarding his methods of procedure. Were dilutions made, or were plates made straight from the urine; and secondly, was any attempt made to exclude the so-called pseudo-organisms? In some of our analyses we have met with an organism that gave the reaction of the typhoid bacillus in all culture media, except in gelatine which it slowly liquefied, and even there it would be from ten to fourteen days before

it would show this difference from the typhoid bacillus. With the dry blood method it always gave a pseudo-reaction, that is, an imperfect clumping, which in a hasty examination might be mistaken for the action of the typhoid bacillus. I would also like to ask if he has tested the Hiss media, which is said to far surpass Elsner's in respect to efficiency.

As regards the lurking of the organism in the bladder for so many years is it not possible that the patient may be re-infected and a nephritis or cystitis set up by the second invasion without any of the usual symptoms of typhoid? Bearing upon my question there was a case I believe in the hospital last summer in Dr. Young's service where he credited the patient with carrying the organism for seven years. He isolated the organism and permitted me to go over the work and it was evident that he had obtained the bacillus typhosus; but he had great doubts as to whether the patient did really suffer with cystitis all the years after the primary infection.

As regards the finding of the organism in the urine I would like to know whether it has been isolated at any time in the absence of albuminuria, cystitis, or symptoms of nephritis. There are cases on record in which the urine has been reported as completely free from evidences of bladder or renal involvement; practically always, however, slight traces of albumin are found with few casts. These are matters I think that would make the routine examination of the urine very necessary. The disease may be spread, especially in country families, through the friends attending the patients and then going about ordinary household duties, neglecting the disinfection of urine and faeces of the patients, and of their own hands.

Dr. Gwyn.—I would say that in many of these cases a dilution was not necessary. As to the tests for differentiating the typhoid bacillus the usual tests, the growth in ordinary media, the motility of the organism, the non-production of indol and especially the serum test, were always used. We have not used Hiss's media this year, but I have used it before with satisfaction. In many cases the urine will show quite large amounts of albumin with casts and pus; evidences of acute nephritis and cystitis. In the majority of cases a mere trace of albumin with few casts and little or no pus will be found. Cases are reported in which the urine has shown absolutely no evidence of changes, either in the kidneys or bladder. All of our cases have shown at least a trace of albumin.

The first case I referred to is, I think, that which was under Dr. Young's care.

A CASE OF GENERAL INFECTION BY THE DIPLOCOCCUS INTRACELLULARIS OF WEICHSELBAUM.

By N. B. Gwyn, M. B., *Assistant Resident Physician, Johns Hopkins Hospital, Baltimore.*

The diplococcus intracellularis meningitidis, now recognized as the causative agent of cerebrospinal fever, while found in the meningeal lesions, has not as yet been demonstrated in the general circulation, nor have we known it to play the part of a general infective agent. During the past few months there have been admitted to Professor Osler's wards a series of 11 cases of cerebrospinal fever, and in one of these the specific organism has been demonstrated not only in the meningeal lesions, but in the blood and in the inflamed joints. The history of the case is as follows:

Jacob B., aged 24, native of the city, was admitted November 4, 1898, supposed to be suffering from typhoid fever. The patient was a packing-clerk in a manufactory, and had always been strong and well. There was no history of contact with any cases of meningitis. On Nov. 1, after two or three days of slight indisposition, the patient was seized with severe pain in the back of the neck; subsequently he had a chill with nausea, vomiting, and fever. On Nov. 2 he was very much worse. He had become delirious and was feverish. He had diarrhœa, and friends noticed that there were "drawing" movements of the hands. There was no retraction of the neck nor any stiffness of the muscles. On Nov. 4 he was seen at home by Dr. Hastings. The temperature was 100.8°; he was delirious; the limbs were very rigid; the spleen was palpable, large, and firm. He was ordered to be sent at once to the hospital. The condition on admission was as follows:

He was a well-nourished man; the cheeks were flushed, the pupils dilated, equal, reacting to light and on accommodation. He was unconscious and could not be roused. The tongue was coated; the throat was clear. The rigidity of the muscles of the neck and back was marked, and the body could be lifted with the hand placed under the occiput. The respirations were quick and jerky and there was impaired resonance in the right axilla. The pulse was 140, temperature 100.2°, respirations 44. There were swelling and redness of both elbows, the right wrist, the right knee, and several of the smaller joints of the hands.

On Nov. 5 he remained in much the same condition, with marked rigidity of the neck and of the abdomen. Purpuric spots developed about the feet. The defective resonance over the right lower lobe of the lung increased, and was present also in the left infrascapular region. The affected joints were more swollen and red. Slight external strabismus had developed. A reddish purple mottling of the skin of the body and extremities was noted. The urine contained a large amount of albumin with hyaline and granular casts and red blood corpuscles. The patient gradually failed and died at 10.40 on the morning of the 6th, the temperature having gradually risen to 105.5° before death. The leucocytes increased from 17,000 per cubic mil. on admission, to 37,000.

Lumbar puncture was performed on November 5, and cultures were taken from the blood and from the swollen and inflamed right knee joint. By the lumbar puncture a rather characteristic seropurulent exudate was obtained. In it the characteristic hemispherical diplococcus was found, both in the leucocytes and lying free, isolated, and in small clumps. Numerous large swollen forms were also seen, all of these readily decolorized by Gram's stain. Cultures from the meningeal exudate were made by inoculating the surfaces of Loeffler's blood-serum and glycerin-agar tubes with a large quantity, as much as one-half cc. After 18 hours in the thermostat at 37°C., the blood-serum and glycerin-agar tubes

showed a characteristic growth—small, isolated colonies from ½ to 1½ mm. in diameter, on the Loeffler's blood-serum, raised, soft, viscid and white, on the glycerin-agar, rather translucent, the colonies, as seen by the microscope, being finely granular with regular borders. Morphologically the organisms showed typical biscuit-shaped or hemispherically-shaped cocci, arranged as diplococci, staining well with gentian violet, better with methylene blue, and decolorizing readily by the Gram stain.

From the knee joint about 3 cc. of thick, yellow stringy pus was obtained. Hemispherical diplococci, both intracellular and extracellular, were found in it, corresponding in morphology to those found in the meningeal exudate. Of the plates taken from the knee-fluid the blood-serum agar showed numerous small colonies about ½ mm. in diameter, the agar plates showing also nine or ten smaller ones. The organisms were identical in form and staining reaction with those from the meningeal exudate.

The Blood. 10 cc. were taken. On the blood-serum agar plates three minute but well-marked colonies grew. They presented the typical hemispherical cocci easily decolorized by Gram's stain. In a tube of undiluted blood at the upper end of the clot which had formed, there was a faint, greyish patch, in which were diplococci similarly arranged and of similar staining reaction. In all of the cultures there were found occasional, deeply-staining, large, swollen diplococci, and others again which remained pale among the neighboring well-stained organisms.

Further cultures from the knee and blood gave typical growths on Loeffler's serum. The cultural peculiarities of the organisms from the three sources were identical and are as follows: on agar, faint growth of isolated, small colonies; in litmus-milk, no change noted, no coagulation, no acidification; growth was proved by reinoculation from the litmus-milk tubes. In bouillon, a slight cloudiness with a stringy precipitate. On potato (slightly acid) there was no visible growth, though the organisms could be demonstrated on coverslip. In gelatin and glucose-agar there was a very slight, disconnected growth, with no evolution of gas in the latter, nor liquefaction of the former.

Transplants from the undiluted blood tube gave no further growth.

In all the protocols the characteristic diplococcus, decolorizing by Gram, could be demonstrated. The feebleness of the growth of the organism was shown by the number of inoculated tubes which remained sterile, and in the fact that after 48 hours on a culture-medium reinoculation frequently gave negative results. The morphological and cultural qualities show that the organism from the three sources was identical, and was the diplococcus intracellularis meningitidis or meningococcus.

This is believed to be the first instance recorded in which general infection or septicæmia has been demonstrated in this disease. In the report on epidemic cerebrospinal meningitis Councilman, Wright, and Mallory make the statement that "so far as can be learned from cultures of blood, liver, spleen, and kidneys, at the post-mortem, septicæmia is never produced. The organisms may have been present and not grown out on cultures. They are never found except in connection with the lesions of the disease."

The autopsy on this case showed the organisms only in the characteristic lesions in the brain and cord. No serum-reaction could be demonstrated. Of special interest is the fact of the separation of the organism from the inflamed joints, which throws light upon the cause of the arthritis, not infrequently associated with the acute infections, and particularly with cerebrospinal fever.

CORRESPONDENCE.

A PIN IN THE APPENDIX VERMIFORMIS.

MAY, 1, 1899.

Editor of the JOHNS HOPKINS BULLETIN, *Baltimore.*

Dear Sir.—In your issue of January, February and March, there is an article by Dr. Mitchell on foreign bodies in the vermiform appendix with special reference to pointed bodies. I was not aware that these cases were so rare.

I reported such a case to the New York State Medical Journal, Oct. 24, 1896. In this instance the appendix had ulcerated and perforated; nature had taken care of the condition with adhesions. After the appendix was removed we found a pin in the appendix, head down, with the point caught in the wall. Upon inquiry later the little fellow said he had swallowed a pin about a year previous while playing with his brother, who tried to take it away from him, and he swallowed it to avoid his brother getting it.

Yours very truly,

D. C. MORIARTA.

511 Broadway, Saratoga Springs, N. Y.

PROCEEDINGS OF SOCIETIES.

THE JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY.

Monday, February 6, 1899.

A Demonstration of Intestinal Anastomosis by Means of a New Forceps.—Dr. ERNEST LAPLACE.

Mr. President, Ladies and Gentlemen.—Allow me, if you please, the privilege of expressing my great appreciation of the honor conferred upon me in being allowed to appear before the Medical Society of the Johns Hopkins University. It is a compliment, perhaps the greatest one that a member of our profession can have at present, because of the credit which the Johns Hopkins University has brought to the profession of medicine in America. This is only appreciated by those who have traveled over this country and abroad and learned of the standing of your members. Therefore when I realize that I am with you to-night I find it impossible to express my true feelings and I can only hope that you will think me sincerely thankful for the privilege of being here.

The object of this demonstration is to show an instrument that has for its purpose the facilitating of the operation of

anastomosis. Without entering into a consideration of the operations done heretofore for this purpose, all of which have their advantages and, of course, some disadvantages, I believe it is agreed among surgeons that the ideal operation is that performed by means of sutures, that operation by which the ends of the gut are sutured together, and it matters little whether we use a continuous, a Lembert or other suture. The suture operation is the operation of to-day, and I believe is destined to be the operation of the future. Any apparatus, any instrument, any contrivance that can facilitate the accomplishment of this operation is, I believe, something to be studied and if it possesses any merit, something to be adopted in such cases as require rapidity. We know that rapidity in operating will diminish the amount of shock, and may, perhaps, remove the last straw that would have broken the camel's back.

Now I have been trying for some time to devise these simple forceps which consist only of two ordinary hæmostatic forceps, bent or curved at the end into a semicircle so that placing the two together they form a complete ring or circle. Then I have a little clasp here which holds them together. Now these two rings are to subserve the same purpose that the Murphy button or the Halsted rubber bags do, or that any other support within the gut can accomplish and in addition, no matter what stitch you use, these rings can be removed just before the last stitch is placed, without any difficulty.

I shall now demonstrate the manner of operating on the intestines which we have here. Inasmuch as we have to deal with intestines of different caliber we have devised five different sizes of the forceps as seen here. The smallest is for work on the gall-bladder, and it makes a quick way of operating.

I have here a stomach and a bit of intestine and my purpose shall be to unite the gut to the stomach. Putting them side by side in this way, I take the knife, and, depending upon the size of forceps I wish to use, I make the incision. Here I shall make a large one and use the large caliber forceps. Making the incision directly into the stomach and then one into the gut I have here the two openings, into one of which I introduce one blade of the forceps, and into the other the second blade and they are ready to clasp. Now when this is done the operation is practically over. All I have to do is to put the stitches in.

Now as I go around the gut towards the end of the area to be sutured I reach that part of the operation which is ordinarily difficult to perform. Here, however, my assistant will simply turn the forceps over, reverse the whole thing for me and, as he brings the unsutured portion of the gut before me, what has heretofore been so difficult, is now the easiest part of the operation. Now I have sutured it all around, except where the handle of the instrument projects through the wound and I want to remove it. I first remove the clamp, which allows the two halves of the forceps to fall apart and then, drawing out one half, not straight, but describing a semicircle, it is easily removed and the other half can be made to follow in the same way. Now all I have to do, is to put in one more stitch and the operation is finished. I shall now make an opening in the stomach, however, and show you that the gut is perfectly patulous.

Now let us do an end to end anastomosis. Wishing to unite the two ends of the gut you first measure for the size of the forceps needed and to make sure that the mesenteric surfaces will meet, you begin by placing the four fixation sutures at the four cardinal points. Now I can introduce the forceps anywhere between these stitches. Dr. Cushing very properly asked me to-day, "What would you do if you had to anastomose guts of different caliber?" The answer to that is that I should invaginate the two ends, and for that purpose I have devised this little instrument for catching the gut at its border, dipping it down into the bowel, stitching it nearly all the way around, and then withdrawing the forceps.

Now gentlemen, this I believe meets all the possible indications for operation upon the intestines. I first presented this method at the last meeting of the American Medical Association in Denver, last June, and on the same day it was published in the Philadelphia Medical Journal. I have since then demonstrated it in Philadelphia and other places. At one of these demonstrations I invited a gentleman in Philadelphia to see the operation, and at its close he told me that he could simplify these forceps, and within 24 hours he exhibited the forceps he had made. His description of them was published last Saturday in the Philadelphia Medical Journal. I wish therefore, in justice to this instrument, to say a few words, not in criticism of his forceps, but simply to show how they were developed. It is natural to suppose that in getting up an instrument of this kind it did not jump into existence all of a sudden; it had to grow, as it were. The idea was to have a ring that would be removable and it was natural to think first of a ring such as he devised instead of one like this, and in fact, the very first forceps I made had exactly the shape of that published by this gentleman last week; it was ¾ round and ¼ open. He has no claim to originality except that the forceps are simpler than mine. You can easily see that when I remove one-half of these forceps at a time I have to describe a semicircle, and if either branch of the forceps were more than a semicircle I should have to make the turn something more than a semicircle to remove it. In other words, to divide a ring into the two smallest possible portions I must divide it in half, for if one portion be smaller than a half, the other must be larger. This gentleman published his claim 24 hours after he first thought of the idea and he therefore had no opportunity to test it, and he does not know what I learned by experience. I claim therefore that while his may be simpler it does not meet all the requirements of the case and I have given mine the shape you see because it seems to be the simplest possible instrument that will meet every possible emergency. I have in my possession the first forceps I used for this purpose more than a year and a half ago, which are like those published Saturday, and which I discarded because it was not the required thing.

Dr. Halsted.—I should think that for a lateral anastomosis it promises all that Dr. Laplace claims for it and we shall certainly give it a trial very soon. It is quicker, much quicker, I should say, than the method we employ; I cannot say how many minutes, because, of course, one cannot deter-

mine that point by work upon alcoholic specimens. I should think it would be of great assistance especially for chole-cysto-enterostomies. It is possible, of course, to do this operation without an instrument, but it is a very difficult one.

I was interested in Dr. Laplace's reply to Dr. Cushing's question as to what he would do in an end to end anastomosis if the guts were of different sizes. If I understood him he would really do a lateral anastomosis, or reduce them to the same caliber. The fact is that in surgery one very often, perhaps usually, when doing end to end anastomoses, has to deal with intestines of different sizes. I think we have had three or four within the last year where the intestines were of different size and it is a question still, I suppose, as to whether it is not advisable, if possible,—if it is not preferable I mean, to do an end to end anastomosis rather than a lateral anastomosis, because we do not, as you know, have as good ultimate results in the latter as in the former.

DR. LAPLACE.—I believe that in such a case as Dr. Halsted speaks of, if the gut is distended and thin it can be puckered up in the manner I have hinted at, that is, having made the four cardinal sutures, if the guts do not invert, all you have to do is to insert a temporary suture, pucker the large gut and then continue as you would with the Murphy button.

A New Operation for Vesico-vaginal Fistula.—DR. KELLY.

I wish to present two interesting cases which I have had during the past year, in which I have been obliged to resort to new procedures in operating upon vesico-vaginal fistulæ. You all know very well that the history of the vesico-vaginal fistulæ instituted an important era in the history of surgery at large; in fact, I imagine the enthusiasm over the work of Jobert of France, Sims of this country, and Simon of Germany, was due to the fact that men recognized that it was the replacing of older surgery by newer and more accurate work. Now when Sims closed vesico-vaginal fistulæ and succeeded as no one had succeeded before, and as Dr. Emmett succeeded even better afterwards, better perhaps, than any one ever will again, I think men felt that the chapter on this subject had been closed. The truth was, it had only been opened, for the operation was applicable only to the simple cases and it was necessary to devise new operations for the more difficult cases. We know that even these operators did not succeed in a large percentage of cases, for in many they were obliged to resort to closing the vagina and turning the current of the urine into the rectum.

The great difficulty in handling certain cases of vesico-vaginal fistulæ is due to two facts: in the first place, the fistula may be a very large one, and in the second place there may be such an amount of scar tissue surrounding the fistula that its resistance prevents bringing together the parts. In cases of large fistulæ with entire loss of the base of the bladder and with scar tissue in the vagina, the old method of operating was to open through Douglas' cul-de-sac, turn the uterus so that its fundus was brought out at the vulva, suture the bladder to the posterior wall of the uterus so that it was made to do the work of the base of the bladder, finally making a hole in the fundus through which the woman could menstruate. The most important recent finding has been the recognition of the fact that the bladder tissue itself is not often seriously involved in the scar tissue, and that the bladder can be drawn down and sutured to itself so as to close the fistula. This is a very important factor in the treatment of certain of these cases that cannot be treated in the classical way.

A case came to me from New York this fall, upon which an abdominal hysterectomy had been performed for fibroids. There was a large fistulous opening into the bladder, from the vault of the vagina. It was very close to the peritoneum, high up in a virginal vagina, had been operated upon several times and there was an abundance of scar tissue. The edges of the fistula were of such character that I could have no hope of bringing them together and securing union. I opened the abdomen, my intention being to expose the pelvic floor, dissect the bladder away and sew it up. The patient had a very large ventral hernia and, unfortunately for the facility of the operation, was very fat. I opened the abdomen, started on my plan, but in attempting to separate the bladder it began to tear and tore so widely that I saw at once a successful operation as planned would be impossible. I then cut through the top of the bladder to see if I could get at it from the inside, and then freshen and bring the edges together. I could not do this and therefore split right down through the opening to draw the parts together, but I found that this procedure could not be carried out satisfactorily and so I followed this plan which succeeded. The bladder was widely opened, in fact split in half; I found the bladder in front of the fistula fairly movable and I continued the denudation directly down, starting with the bladder walls above and then, passing some catgut sutures, bringing the wounds together. I had thrown out of use a little of the bladder at the sides of the fistula. I then put a drain through the vagina up into the peritoneum and closed up the hernia, which was an extensive one. The patient made an immediate and perfect recovery.

It is a new thing to have gone, by means of a suprapubic incision, through the mucosa of the bladder, drawn the fistula out and closed it by diminishing the capacity of the bladder.

CASE 2. A doctor wrote me from Virginia that he had a case of vesico-vaginal fistula and wanted to know what was the best way to operate upon it. I replied that the best way was to send it up here, as he had had no experience in operating upon such cases. The fistula could not be gotten at from below; I therefore opened the abdomen, separated the bladder, freed the fistula on both sides and brought the edges together with catgut. The result was a perfect recovery.

DR. HALSTED.—In the first case, Dr. Kelly, did you excise the portion of the bladder that contained the fistula?

DR. KELLY.—No.

DR. HALSTED.—What became of it?

DR. KELLY.—It lay up in the peritoneal cavity protected by a drain.

DR. HALSTED.—Does she still have a little fistula?

DR. KELLY.—No, it is all closed up.

Primary Cancer of the Appendix.—Dr. Hurdon.

Dr. Hurdon presented a case of primary cancer of the vermiform appendix.

Dr. Kelly.—This subject is a large one and it would require a volume to go into it completely and do it justice, so that here one can only outline a few of its important relations. I have been paying close attention to the relation of appendical disease to pelvic diseases for a long time, and the records of our department will show the exact condition of the vermiform appendix in every case in which the abdomen has been opened for about 2 years past.

We meet with appendical disease in a great variety of relationships. We may have cancerous disease of the appendix as in this case, where there was an adeno-carcinoma, which showed no relationship to the pelvic disease; then, again, we meet with cases in which the disease is dependent upon the condition of the pelvic organs. I had within 48 hours, last week, five cases in which I had to remove the appendix.

Where the disease depends upon the pelvic organs, the appendix becomes adherent to the diseased organ, as a uterine fibroid, or an ovarian tumor; these cases we see quite frequently. Then again we meet with a class of cases in which the appendical disease has followed an operation; these are more rare, but quite interesting. After a clean operation, as the enucleation of a diseased tube or ovary, the patient within a few months or a year complains of a pain in the right side, etc. The abdomen is opened and the appendix is found adherent to the seat of the former operation. I have had such a case within the past ten days, where the appendix was pulled out long, and was adherent to the old wound.

It is important to bear this in mind and always inspect the appendix whenever a laparotomy is performed.

This case emphasizes another important fact, that is, how to treat these cases by operation. I believe in the removal of all abnormal appendices, but I do not believe in taking advantage of the opportunity to remove a normal appendix.

Monday, February 20, 1899.

New use for Renal Catheters.—Dr. Kelly.

I have a brief but important communication to make regarding the further extension of the use of renal catheters.

It did seem a few months ago that certain discoveries were going to limit the use of them. Dr. Neumann, of Guben, found that without catheterizing the ureter he could separate urines and retain them separated in the bladder, obtaining them later from the bladder by means of tubes. This was done by using an instrument of this kind (drawing) which he calls a urine separator. It is a tube with a solid septum running down the centre and projecting beyond the end of the glass tube; the form of the catheter is retained by means of a wire cage. Urine running in this side will run down and discharge at the outer end, and the same for the other side. If we put this instrument into the female urethra and bladder, press it up against the symphysis and then with the index finger in the vagina, push the floor of the bladder against the instrument, we have the floor of the bladder separated into two loculi so that the urine coming out of the right ureter runs down on one side, and that from the left on the other, thus giving us a simple method without using the catheter.

This was published in October in the Deutsche medicinische Wochenschrift and not long after Dr. Harris, of Chicago, was able to use a small staff so as to form two little pockets in which the urine was accumulated and was drawn off by the catheter.

These methods did look at first as if they would very much limit the field of the catheter, but a new and very important use for the catheter has recently arisen.

We all know that some of the most obscure cases with which we have to deal are those in which there is vague but distressing pain in the side, especially the right, and one may long be in doubt as to whether the pain is renal, hepatic, intestinal or hysterical. By means of this catheter, I have been able to include or exclude the kidney. When the upper end of the catheter presses upon the pelvis of the kidney the patient will sometimes tell us that we are touching the very point where she had the pain. Further than that, I have been able to produce an attack of artificial renal colic by injecting solution of boracic acid into the kidney through the catheter. Again, a patient who has been suffering from renal colic will often have afterwards an attack of genuine renal colic following the treatment. I have had two cases recently that are interesting in this connection. In one there was a tumor below the ribs on the right side. Some five or six consultants gathered together to determine what it was, some thinking it to be a tumor of the gall-bladder. I injected fluid and the patient at once complained of pain in the back quite as severe as a genuine attack of renal colic, so we were satisfied that the kidney was in its normal position.

In the other case which occurred not long ago, the condition was so exactly like a large floating kidney that I unhesitatingly made that diagnosis, nevertheless I passed in the catheter first and produced an attack of colic. The patient would not locate the colic in the lump we felt in front but insisted that it was in the back. We then made a median incision to examine the opposite kidney. Instead of cutting posteriorly I cut in the median line and found by the hand that the left kidney was normal, but on examining the other side I found an enlarged gall-bladder in front of the kidney. The induction of the renal colic and location of the pain by the patient thus gave us our correct diagnosis.

There are then, several valuable uses for ureteral and renal catheters in the future, especially to diagnose the cause of pain, particularly in the right side.

Every surgeon must think at once of the chances of introducing infection into the higher urinary tract, and I am extremely careful about introducing catheters in a case where there is much infection.

I have never seen an infection conveyed from the lower into the higher urinary tract by catheterization of the ureters.

NOTES ON NEW BOOKS.

An American Text-Book of the Diseases of Children. By American Teachers. Edited by Louis Starr, M. D., assisted by Thompson S. Westcott, M. D. Second edition, revised. (*Philadelphia: W. B. Saunders*, 1898.)

The second edition of this work is in many respects an improvement on its predecessor. In any work, by so many authors, a certain overlapping of material and variety of opinion on important subjects is to be expected, and compared with similar works by a single author, must seem lacking in uniformity. Under the competent editorial direction of the present volume, however, this defect has been as far as possible eliminated. The entire subject-matter has been revised, many articles rewritten, and some new ones introduced.

Among the latter are "Modified Milk and Percentage Milk Mixtures," "Lithæmia," and a section on "Orthopædics."

The first of these is brief but sufficiently practical for a working knowledge of the important subject.

"Lithæmia" is well discussed by Dr. B. K. Rachford. The author, however, speaks with a certainty of the rôle of the alloxuric bodies hardly warranted by our present imperfect knowledge of the pathology of the so-called uric acid diathesis.

In a short section of twenty-seven pages, Dr. J. E. Moore has condensed much of real use to the general practitioner on the subject of orthopædics. The article is well illustrated and is a decided addition to the volume.

The articles rewritten are "Typhoid Fever," "Rubella," "Chicken Pox," "Tuberculous Meningitis," "Hydrocephalus" and "Scurvy."

Those on "Infant Feeding," "Measles," "Diphtheria" and "Cretinism" have been thoroughly modernized.

In the treatment of diphtheria one expects more emphatic mention of the antitoxin and less of the use of such almost extinct measures as swabbing with hydrogen peroxide, calomel fumigations and the various solvents mentioned.

The articles on hereditary syphilis and diseases of the new-born are very good.

In the light of recent investigation more mention might be made in the articles on cerebrospinal meningitis of the bacillus intracellularis of Weichselbaum. On the whole, however, the book very well fulfills the purpose for which it was compiled—a text-book for students carefully condensed with few omissions, and a reference book sufficiently practical for the general practitioner. The mechanical construction is excellent, and the numerous illustrations instructive. R. A. U.

Text-Book of Materia Medica, Therapeutics and Pharmacology. By G. F. BUTLER. Second edition. (*Philadelphia: W. B. Saunders*, 1898.)

A review of this book was published in the BULLETIN about two years ago. The changes in this edition seem to be very slight, the only notable additions being a table of the "untoward action of drugs" which brings a large amount of very useful information into a small compass and a form convenient for reference.

Annual and Analytical Cyclopædia of Practical Medicine. By CHARLES E. DE M. SAJOUS, M. D., and one hundred associate editors assisted by corresponding editors, collaborators and correspondents, Vol. II. (*The F. A. Davis Co., Philadelphia*, 1898.)

Volume II of the Annual and Analytical Cyclopædia of Practical Medicine contains some valuable articles on therapeutics; not only are the latest papers and cases cited, but a systematic account of the preparations of the drugs and their physiological action is given; special emphasis, however, is laid upon the untoward action of the drugs and their use in therapeutics. All the most important drugs between bromide of ethyl and digitalis are discussed in this volume, and in most cases with considerable fullness. Thus 22 pages are given to chloroform and 17 to digitalis. Under chloral the various new combinations of this drug with other hypnotics are described and their relative merits discussed. Under bromine and its preparations considerable attention is given to bromism and a word of warning raised against the reckless use of these remedies in epilepsy.

Some of the other drugs discussed in this volume are cinchona, caffeine, colchicum, the preparations of copper, curare (which seems to be yielding good results in certain diseases), cubeb, etc. In some cases (notably in the article on digitalis) there is a tendency on the part of the editor to quote freely from the ordinary text-books on the subject rather than from original papers, but on the whole perhaps the most recent views of physicians as to the value and methods of administering the drugs which are discussed in this volume are nowhere better expressed than here.

Essentials of Materia Medica, Therapeutics and Prescription Writing. By HENRY MORRIS. (*Philadelphia: W. B. Saunders*, 1898.)

This useful little book has now reached its fifth edition. The general plan is the same as in former editions, the chief alterations being the omission of certain parts and the introduction of some of the newer remedies. Welcome additions are the introduction of the metrical, as well as of the apothecaries' system of weights and measures, and a very carefully prepared index. It seems to us that this little work has more value than some of the numerous manuals which though more pretentious are neither fuller nor more accurate.

Saunders' Pocket Medical Formulary. By W. M. POWELL. Fifth edition. (*Philadelphia*, 1899.)

This book contains over seventeen hundred prescriptions arranged alphabetically according to the diseases to be treated; these formulæ are taken from a great variety of sources—text-books and manuals of therapeutics, medicine, surgery, obstetrics, the various specialties, from original papers, and not a few from various hospitals. The book also contains tables of doses, incompatibles, antidotes, gargles, inhalations, a "surgical remembrancer," a diet table, obstetrical tables, etc., all arranged in such a way as to make consultation of it as easy as possible. It is remarkable how much information the author has succeeded in getting into so small a book.

The Anatomy of the Central Nervous System of Man and of Vertebrates in General. By LUDWIG EDINGER. Translated from the Fifth German edition by WINFIELD S. HALL, PHILO LEON HOLLAND and EDWARD P. CARLTON. 445 pages. 258 engravings. (*F. A. Davis & Co., Publishers*, 1899.)

Great productive activity has characterized of recent years the study of the anatomy of the nervous system. Even the investigator devoting his whole time to the subject finds it almost impossible to keep thoroughly acquainted with the results of others in the same field, and any text-book grows old so fast that revised editions of it appearing only a few years apart, have to be so much rewritten as to seem like new books.

The two authors who have been most successful in seizing from the great mass of ideas and facts annually brought forth materials wherewith to build clear and definite representations of modern neurological conceptions are Van Gehuchten of Louvain, and Edinger of Frankfort. The former writes mainly from the point of view of outline schemes based upon the neuron concept. Edinger, on the other hand, while utilizing both the neuron doctrine and outline schemes, is concerned rather with the form relations of the anatomical mechanisms of the nervous system. His illustrations have, many of them, the rare merit of suggesting real structures and the third dimension. He has been especially interested in comparative studies. In the preface to the second edition, quoted in the fifth, he writes as follows:

"There must be a number of mechanisms which are present in all vertebrates: those which make possible the simplest expressions of the activity of the central nervous system. It is only

necessary to find that animal or that stage of development in any animal in which this mechanism appears in so simple a form that it may be completely understood. Once any one has anywhere perfectly established the relation of such a mechanism, *e. g.* a nerve bundle or a cellular structure, he is able usually to find it again, even where, through adventitious matter, it is made more or less obscure. The discovery of such fundamental features of brain-structure appears to be the next and most important task of brain morphology. Once we know them it will be easier to understand the complicated mechanisms with which the more highly organized brain performs its function."

The suggestiveness of this point of view, together with a clear and attractive style have rendered Edinger's book deservedly popular. Successive editions have rapidly followed one another, the first, quite a small volume, appearing in 1885, the fifth, greatly enlarged, in 1896. The book is now divided into three parts.

Part I is introductory. In forty pages a clear, interesting and concise description of the fundamental ideas accepted by most modern neurologists, is given.

Part II gives a review of the embryology and the comparative anatomy of the vertebrate brain. Something over 100 pages are given up to this subject. It is especially attractive because of the author's personal researches in this line.

Part III treats of the structures found in the mammalian, especially in the human brain. To this nearly two-thirds of the book is devoted. Text and illustrations serve to make this intricate subject uncommonly clear.

The translation is for the most part fairly satisfactory. The illustrations have been well reproduced. The book should meet with the welcome reception it so richly deserves. B.

The Pocket Formulary for the Treatment of Disease in Children. By Ludwig Freyberger, M. D., Vienna. M. R. C. P., London. M. R. S. C., England. (*Rebman Publishing Co., London*, 1898.)

As is stated in the preface the object of this little book is to give the busy practitioner and senior student of medicine, in a concise and handy form, all of the information which may be required as regards the treatment of diseases of children by drugs.

The greater part of the work is taken up by a list of remedies, arranged in alphabetical order, which are best suited to the treatment of children's diseases, and each drug accurately but briefly described as to its properties, source and dose. The scheme which has been adopted in the discussion of the various remedies is as follows: Properties, under which are mentioned the source, ingredients, methods of preparation, etc.; Use, whether internally or externally, and for what; Therapeutic dose, in both English and French (metric) system; Incompatibilities, Correction of Taste, followed by one or more formulæ which, in the author's opinion, are the most suitable modes of administration of that particular drug. The Appendix contains formulæ for sprays, gargles, hypodermic injections, enemata, and suppositories, and the Therapeutic index, which completes the volume, contains an alphabetical list of the diseases of infancy and early childhood, together with the special remedies, which are indicated in each affection.

The book is of a convenient size and of suitable binding to be carried in the pocket, and cannot fail to fulfill the mission for which its author has put it before the profession.

A Text-Book of Mechano-Therapy: by Axel V. Gräfstrom, B. Sc. M. D. (*Philadelphia: W. B. Saunders*, 1899.)

This little book is designed for the use of medical students and trained nurses. There is a strong need for a concise presentation of this subject. In part, it is well supplied here. The book throughout is dignified in tone. Its average merit is more than fair, but its execution is unequal, and many details are open to criticism.

The work treats of both Medical Gymnastics and Massage. A synopsis of the Swedish movement system constitutes the first division. The classification here is especially to be commended, and stands in contrast with much of the discursive and sometimes bewildering literature of this subject. The movements are graphically described, and with or without practical demonstration will serve as a competent guide or reference book to the student. It is to be regretted that in the second division of the book, which relates to Massage, the nomenclature which has become classic through use in the best schools and by the best writers, has been abandoned. Further, while it is of course impossible to master the detail of technique from text-books only, the chapter which treats of it will be little help to the novice. The illustrations of a patient's position while undergoing a kneading of the abdomen is, indeed, distinctly incorrect. At most it can be said that there is furnished here a working basis solely for teachers. The chapter on General Massage is negative, and falls short of the requirements of teachers or scholars. There should be outlined, as was shown to be possible in the Swedish movement system, a definite and recognized system of massage—like that of Dr. S. Weir Mitchell, or of the Swedish or the German school. This outline should include directions as to the position of the patient and of operator; and something of the action of the hand and of its relation to the presented surface.

The concluding chapters, which treat of the application of mechano-therapy to the treatment of disease, aside possibly from the omission of some practical suggestions, are exceptionally thorough, although necessarily and intentionally condensed.

It is interesting to find here included, among the applications of mechano-therapy, the treatment of hernia by taxis, and the kneading of the uterus after labor to maintain contraction—all legitimate forms of massage and very properly so considered.

Foundations of Zoology. By William Keith Brooks. A course of lectures delivered at Columbia University, on the Principles of Science as illustrated by Zoology. (*New York: Published for the Columbia University Press by The MacMillan Co.*, 1899.)

The theme of most of the thirteen lectures is the nature of life which, rather than the physical basis of life, is held to be the foundation of zoology. Huxley's statement that protoplasm is the physical basis of life, leaves out of account the essential idea of fitness as an attribute of such a basis, and the nature and origin of this fitness form the subject of a large part of the discussion.

The author in approving Spencer's definition of life—the continual adjustment of internal to external relations—elaborates it by considering in more detail the nature and effect of external relations or environment, all of which he includes in the term "nurture." "Life is response to the established order of nature." In nature each stimulus which may call forth a response is a sign with a significance, and life is the use of the ability to read and act on these signs—to read the language of the environment.

From this he passes on to show that the nature of the response depends on what, in the experience of the ancestry was found beneficial, and here he develops in an interesting way a reconciliation between the opposing ideas that the development of the complicated nature of an organism with its ability to respond to stimuli is due on the one hand to the inherent potency of the germ, or on the other to response at each stage of its embryological development to external stimuli, by the idea that were we to know exhaustively the nature of the germ, we might see that the responses made to the external stimuli were no more than, from the nature of the germ, we might expect. From all this it is plain that the beneficial result of interpretation and response to stimuli depends on whether the stimuli or signs have the same significance as they had in the time of the ancestors.

These ideas are based on the essential conception that those

animals which do not respond to stimuli properly, in the end die out, and the ability to respond is continued from one generation to another, not by the inheritance of the results of individual adaptation, but by the inheritance of the adaptive mechanism, which is in the end the object of the selective process. Do we exaggerate the importance of the adaptive mechanism when we say that we acquire no nurture except that which our nature provides for? Life is, perhaps in each invidual case, an acquired art, and the adaptive mechanism the inherited thing, and the basis of our expectation of what the organism will do under certain stimuli. In other words, except for the guiding influence of the adaptive mechanism, the influence of nurture will be fortuitous in its effects.

It seems to appear from this that as physical modification is, in the end, dependent on the function demanded for the existence of the species, the adaptation must occur in the active relation to environment, *i. e.* the response to stimuli, and this response depends on the adaptive mechanism which is inherited and competent as long as the environment is essentially that for which in the ancestors the adaptive mechanism was prepared by selection. As soon as this environment changes selection must again intervene and modify the adaptive mechanism.

The views of the Lamarckians are discussed with no great forbearance, and their absurdity especially brought into relief by the idea that "the probability that haphazard effects of nurture will be injurious is prodigious—even if they *are* inherited, they will probably not chance to be beneficial independently of selection—the chances are, therefore, against adaptive modification by the direct action of the environment."

The effects of nurture are to be distinguished from those of ancestry, and here there is introduced an interesting conception of the genealogical tree; for while most writers speak of a geometrical progression in the increase of ancestors, as we go further and further back, Prof. Brooks shows that these diverging lines, after a little, essentially converge, and that if we go back far enough the plan of ancestry of an individual is rather like a long thread with frayed edges, and from this he deduces the origin of a species from a very few individuals—perhaps one, whence the origin of genera from individuals, and of the metazoan from one protozoan. He pictures the development of the individuals of the bottom fauna from the pelagic in the ancient ocean—their growth in size and powers, so that they subsisted on their ancestors, and traces the peopling of the earth from these. Even to-day the existence of animal life in the sea is still ultimately dependent on the most minute pelagic creatures, which form their food. He gives a most vivid account of the tropical marine fauna, impressing on us the extraordinary absence of vegetable life in those depths, and the fierceness of competition in the bottom fauna as compared with the pelagic—the larvæ of animals living on the bottom become pelagic in the deeper part of the ocean, because otherwise they would be devoured by their parent's neighbors.

The author goes on to the discussion of the argument from contrivance in creation as opposed to the evolution of beings—the consideration of the teleological explanation of creation. As to the "eternal paradox about necessity and freedom he, as an humble zoologist, who admits his accountability, is quite content to leave to Milton's fiends the discussion of 'Fixed fate, free will, foreknowledge absolute.'"

As to the manner of the creation he attempts a reconciliation of the views of Darwin, Gray and Huxley in the wider teleology of Huxley. He does not wholly agree with Huxley in considering that the argument of Paley that the contrivances of human artificers prove nature a contrivance and the work of an artificer has received its death blow in natural selection, but thinks that Paley's argument is rendered inconclusive.

The lectures are concluded with a consideration of the work of Agassiz and that of Berkeley. Agassiz's idea of the wider teleology—that "it is not because we find contrivances in nature, but because the order of nature is one consistent and harmonious whole that he holds it to be intended"—was, of course, pre-Darwinian. He considers all the data of natural science as a language in which the creator tells us the story of the creation, and Berkeley too, finds in the signs to which in life we learn to respond, as stimuli, the parts of a language which we come unconsciously to read and know—in which the creator reveals to us the intentions of the creation.

The book is interesting in its breadth of conception and clearness of style. While in the main a criticism of the theories expressed by previous writers many of the theses are based on the profound knowledge of biology of the writer himself, and we cannot but think as we follow his convincing reasoning, that we have be'ore us the latest addition to American classics in scientific literature. W. G. M.

The Mineral Waters and Health Resorts of Europe. Treatment of Chronic Diseases by Spas and Climates, with Hints as to the Simultaneous Employment of Various Physical and Dietetic Methods. Being a revised and enlarged edition of "The Spas and Mineral Waters of Europe." By HERMANN WEBER, M. D., F. R. C. P., and F. PARKER WEBER, M. D., F. R. C. P. With a map. (*London: Smith, Elder & Co.*, 1898).

The title of this enlarged and revised edition of a well-known work, states in a general way its scope and purpose. It is, however, more than a mere description of the various European sanatoria; it includes a general account of the therapeutic uses of water that, in itself, will be found a valuable guide to the many who wish to utilize this agency. The usefulness of health resorts, as the authors claim, is not overstated, and all the accessories to the water cure are fairly stated and valued; it would be a very excellent thing had we some work of this kind on American health resorts.

Two new chapters have been added, besides the general revision; one on sanatoria other than hydropathic ones, and one on the different diseases in relation to the selection of mineral waters, climatic and other cures, etc. The latter is quite lengthy and full; the former hardly as much so as it might well have been made, or as the subject deserved. Considering the importance attributed to it at the present time, the space given to sanatoria for consumptives, (*only* about four pages), is not by any means as much as could well have been devoted to it. There is already quite a growing literature of the subject, and it seems likely to have a larger share of professional and other attention in the near future.

The bibliography at the end of the book, though not exhaustive, is quite lengthy, and will be found useful for reference.

Atlas of Syphilis and the Venereal Diseases, including a brief Treatise on the Pathology and Treatment. By PROF. DR. FRANZ MACEK. English translation from the German. Edited by L. BOLTON BANGS, M. D. Seventy-one colored plates. Cloth, $3.50 (*Philadelphia: W. B. Saunders*).

This admirable little volume deserves a wide circulation. The full page colored plates, from original water colors, are remarkably well-executed for a work of such popular price. The various manifestations of syphilis are taken up in order of their development, and together present a vivid pictorial representation of the disease. The lesions of chancroid, bubo, condylomata, etc., are given much less space, but are well shown. The appended treatise, while necessarily brief, is only fairly well done, and the methods of treatment are not such as would find favor in this country. To treat syphilis solely by inunctions which are discontinued almost as soon as a disappearance of the symptoms occurs, and only resumed in their reappearance, seems to us irrational, as well as dirty, and tedious. Since the author omits the protoidid from

the preparations of mercury used in syphilis, and remarks that the "best way is to give the patient a bottle of potassium iodid and let him *prepare it himself*," we are not surprised at his failures in the internal treatment of syphilis. H. H. Y.

The Office Treatment of Hemorrhoids, Fistula, etc., without operation, together with remarks on the relation of diseases of the rectum to other diseases in both sexes, but especially in women, and the abuse of the operation of celostomy. By CHARLES B. KELSEY, A. M., M. D., etc. (1898, *E. R. Pelton, N. Y.*)

The title of this little book would lead one to suppose that some new and simple method of treatment is to be promulgated, and the reader is fed on glittering generalities, medical anecdotes and chit-chat, until finally a time comes for divulging the long-expected panacea, when the whole subject is dismissed with the remark that there is not time to describe the plans of treatment.

The author asserts that he prefers always a "straightforward," truly surgical operation, such as "laying open the bones for fistula," and "clamp and cautery" for hemorrhoids. All surgeons, however, would hardly agree with his idea of "straightforward" surgery. For one, we would protest against the widespread usage of such barbaric and unsurgical treatment as the clamp and cautery. The cautery was, doubtless, a valuable surgical instrument before our forefathers learned how to ligate vessels, but since that date its use has been discarded by all surgeons except the pile specialists.

It has been clearly shown by Quéme that hemorrhoids are due to a general phlebitis of the inferior hemorrhoidal plexus—around the entire anal circumference; it is evident that burning off a more prominent lobule here and there does not eradicate the disease. This is proven by the frequent recurrence or development of piles in areas not burned—that is, from diseased vessels left behind.

How representative surgeons can prefer such crude methods to the beautifully exact, radically truly surgical and absolutely curative procedure known as the Whitehead operation, it is hard to understand. To say that the latter method is difficult, hemorrhagic and tedious, is a confession of inferior operative ability.

This little volume is divided into three parts—the first being a description of that "office treatment" which eludes the reader at the last moment. The second part is an exhortation to young would-be rectal specialists to consider the broadness of their chosen specialty, and not to worry over the narrow limits of their pasture.

I will quote at length, as the line of argument is interesting as showing how a specialist entering the body at one little "locus minoris," so to speak, may gradually claim, by propinquity, and sympathy, sovereignty over the larger part of the body. It reads:

"Would any of you admit to a patient that, although your specialty called upon you to be able to operate upon an abscess opening into the bowel at one point, you did not feel competent to operate upon another opening a little higher? . . . . Are you equal to a resection of a stricture six inches up the bowel and not at twelve? . . . . Do you wish to take the position that you can suture the bowel to the skin, but cannot suture one cut end to another, that it is your business to remove tumors from the rectum which are pressing upon the uterus, but not tumors of the uterus pressing upon the rectum?

"So you will find the path of practice opens into many broad fields of study and interest, and my advice is to follow them for your own sake . . . . then you have a specialty broader perhaps than any other, and certainly affording ample scope for all of your powers of study and thought."

The last part, which deals particularly with excision of the rectum, as against colostomy, is good surgery, and reflects credit on the author, whose previous good reputation is not enhanced by the previous chapters.

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The Medical Annual and Practitioner's Index. Seventeenth year. 1899. 12mo. 879 pages. John Wright & Co., Bristol.

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Atlas of the External Diseases of the Eye, including a brief treatise on the Pathology and Treatment. By Prof. Dr. O. Haab, of Zurich. Authorized translation from the German. Edited by G. E. de Schweinitz, A. M., M. D. With 76 colored plates and 6 engravings. 1899. 12°. 228 pages. (Saunders' Medical Hand Atlases.) W. B. Saunders, Philadelphia.

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Practical Materia Medica for Nurses. With an appendix containing poisons and their antidotes, with poison emergencies; mineral waters; weights and measures; dose-list; and a glossary of the terms used in materia medica and therapeutics. By Emily A. M. Stoney. 1899. 8°. 306 pages. W. B. Saunders, Philadelphia.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M. D. In twenty volumes. Vol. XVI. Infectious Diseases. 1899. 8°. 785 pages. Wm. Wood & Co., New York.

Statistical Atlas of the United States. Based upon Results of the Eleventh Census. By Henry Gannett. 1898. Fol. 69 pages. Governnent Printing Office, Washington, D. C.

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The Changes Produced by the Growth of Bacteria in the Molecular Concentration and Electrical Conductivity of Culture Media. By G. N. Stewart. Reprinted from the Journal of Experimental Medicine Vol. IV, No. 2, 1899.

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